

The FANNER Line



DESIGN HARMONY

MODERN STORE FRONTS
NEED MODERN

AWNINGS



W. T. GRANT CO. STORE, WHITE PLAINS, N. Y.

Split type awning 39 ft. long. Recess equipped with hinge type lid and operated with one operating mechanism. Fanner gear roller fixtures, lateral arms and lid mechanism used throughout

MODERN store fronts—a recognized merchandising necessity today—have made essential the development of awnings which will harmonize with and enhance the store front design.

In the past architects usually considered awnings as a necessary evil—the store front was carefully studied, designed and constructed, then the awning was added and the whole, beautiful effect so painstakingly achieved was completely destroyed. That condition is now a thing of the past—the awning has assumed its proper place and the architect can now make it an attractive and efficient unit in his complete design.

From a purely practical angle the awning was originally developed

to protect the window displays from the effects of sun. With the advent of air conditioning and its widespread use in stores, air conditioning engineers have proved conclusively that awnings will result in a substantial reduction in the operating costs of air conditioning units since they will eliminate as much as 75% of the heat gained through the window glass.

The purpose of this catalog is to show the architect examples of modern store fronts in which awnings have been made an integral part of the design and to furnish him with basic information which will enable him to take advantage of the latest developments in awning construction in his own projects.

THE COMPANY

THE FANNER MANUFACTURING COMPANY, established in 1894, has engaged in the manufacture of awning parts since 1909. During that time it has pioneered in the development of awning fixtures, lateral arms and hardware that make the present smart appearing, attractive awning installations possible.

FACILITIES AND SERVICE

The Fanner organization of engineers, designers and workmen couple technical ability with practical knowledge of manufacturing awning parts. The services of this organization are always available to architect or awning manufacturer.

In addition, Fanner has everything it requires in physical resources for conducting its business. Our twelve acre plant at Brookside Park in Cleveland houses modern malleable and gray iron foundries, machine, galvanizing and assembly shops—complete facilities for the manufacture of awning parts from raw material to finished product.

Through dealers located in the leading cities throughout the country and through our own warehouse facilities, Fanner gives unexcelled service to the needs of every user of awning parts.

THE PRODUCT

Among manufacturers of awning parts, Fanner is unique in that it is the only manufacturer that produces from raw materials to finished awning parts. As a consequence of constant control of raw

materials and manufacturing operations, engineering and research assistance, products of the highest quality make up the Fanner Line.

In the manufacture of awning parts, malleable iron is used practically to the exclusion of all other metals. Fanner awning parts are fabricated from special analysis malleable iron developed by Fanner metallurgists.

To protect awning parts from rust and corrosion, Fanner awning parts are Hot Dip Galvanized, the most effective method of rust prevention known to metallurgy. Fanner Hot Dip Galvanizing consists of a thick durable coating of zinc, flawlessly applied so that the heavy shell of zinc becomes a part of the product itself. It adds appearance, utility and life to the awning parts.

Unless special treatment is given to malleable iron parts before they are Hot Galvanized, the Galvanizing process is likely to impair the properties of the iron by making it brittle, less ductile, crystalline in formation and low in resistance to shock. To prevent this happening to Fanner awning parts they are subjected to the Flecto Process before they are galvanized.

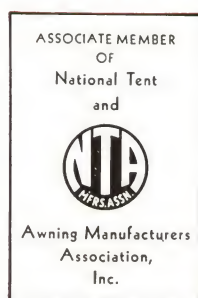
The Flecto Process is a patented thermal treatment given to malleable iron to prevent embrittlement caused by hot dip galvanizing. In addition, the process increases the impact resistance of the iron from 33% to 40% over normal malleable iron. So effective is this treatment that the U. S. Government has incorporated it in its specifications for their own malleable iron.

THE FANNER MANUFACTURING COMPANY is the only awning parts manufacturer licensed and equipped for applying the Flecto Process.

THE FANNER MANUFACTURING CO.

BROOKSIDE PARK

EASTERN OFFICE AND WAREHOUSE
74 Duane Street
NEW YORK, N. Y.



CLEVELAND, OHIO

CANADIAN FACTORY AND OFFICE
CANADIAN FANNER LTD.,
Main and Frid Streets
HAMILTON, ONT.

MODERN STORE FRONTS

Need Modern Awnings

FOR APPEARANCE AND UTILITY



OUTRIGGER ARM

CLOSED

OPEN

DEVELOPMENT of the Fanner Tubulateral Arm has been one of the important contributions to the attractive appearance of modern awnings for modern store fronts. With the old type outtrigger arm the awning supports were exposed on the face of the building, thus entirely nullifying the most careful design. Today, with the Tubulateral Arm, all projecting parts can be hidden and the full effect of the design retained. A comparison of the illustrations at the right and left will clearly demonstrate the clean, unmarred effect obtained by Fanner Awning Equipment.

There are several types of store front and awning construction, each meeting specific requirements. These are outlined below and the architect will find it helpful to consider the store front and awning installation as one problem, since construction of the recess or awning hood is part of the store front contract.



TUBULATERAL ARM

OPEN

CLOSED

TYPES OF STORE AWNING CONSTRUCTION

RECESS CONSTRUCTION—OPEN

Recess construction requires the incorporation in the store front design of a recess of adequate size to accommodate the awning and its mechanism. The awning roller, roller fixtures and lateral arms are installed within the recess, leaving the store front free of defacement that results from the attachment of awning parts. The awning, when not required, is rolled up inside the recess where it is protected and the store front left unmarred.

An awning recess is often described as a "Recess Box" or a "Recessed Awning Bar."

RECESS CONSTRUCTION—CONCEALED

Using a lid to close the recess opening when the awning is not in use is an innovation in recess construction that has protective and decorative advantages.

The lid, made of the same metal as the store front or metal that harmonizes with it, when shut covers the recess opening. The awning, concealed inside the recess behind the lid, is safely protected from weather, dirt and deterioration. The store front, unmarred from the attachment of awning parts and without the awning or

recess opening visible, is improved in appearance tremendously.

Concealed recess construction requires a recess large enough to accommodate the lid operating mechanism in addition to the awning and its mechanism.

Concealed recess construction is sometimes referred to as a "Concealed Awning Bar."

OPEN FACE CONSTRUCTION

When no recess has been provided, it becomes necessary to attach the roller fixtures and lateral arm brackets to the face of the building or to the transom bar and allow the awning roller to project from the face of the building. This construction is described as "Open Face Construction."

OPEN FACE CONSTRUCTION—WITH HOOD

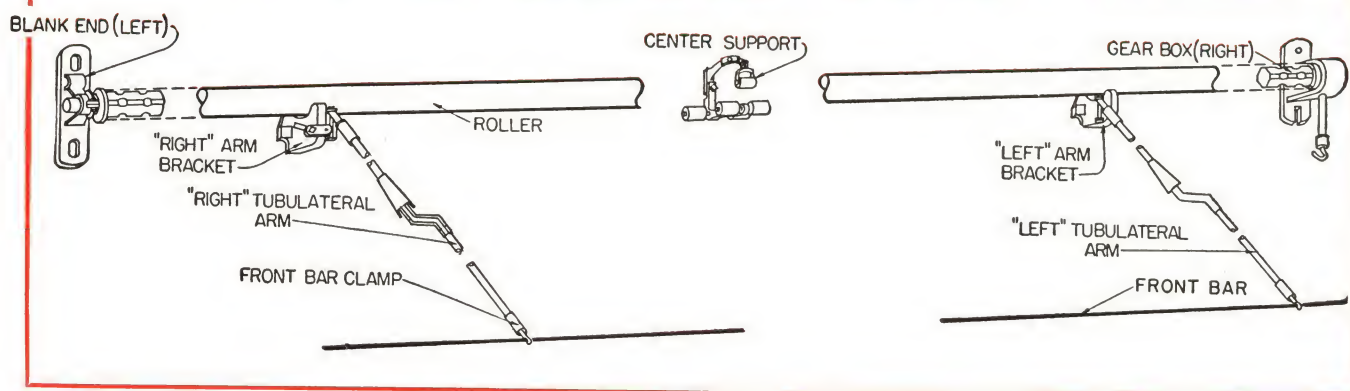
Hoods are frequently used in connection with open face construction to provide protection for the awning when it is rolled up. The hood projects from the face of the building over the awning roller. This type of construction is referred to as a "Hood Type" or a "Hood Awning Bar."



THREE TYPES OF AWNING BARS OFFERING THE ARCHITECT OPPORTUNITY FOR DECORATIVE AND HARMONIOUS TREATMENTS

1. OPEN TYPE RECESS
2. CONCEALED RECESS WITH LID
3. HOOD AWNING BAR

STORE AWNING CONSTRUCTION



The modern store awning is constructed to roll snugly up against the building or into a recess. The awning roller is operated by means of a self-locking, enclosed type, worm gear, which usually is equipped with a hook and operated by means of a winding brace with an eye for engaging it to the hook. Sometimes the worm gear is connected to a gear box that operates by means of a crank. This gear box may be fastened to the face of the building or inside the pilaster, at a convenient distance above the sidewalk, with the drive shaft running down the face of the building or inside the pilaster. The worm gear supports one end of the roller, usually the right end, and the other end of the roller is supported by means of a blank end bracket. If the roller exceeds twenty feet (20') in length, center supports are used to support the intervening section of the roller, the number of center supports required depending on the length of the roller.

The awning when projected is supported by lateral arms that fasten under the awning roller. The outer ends of the lateral arms attach to the front bar of the awning. As the awning winds up on

the roller the lateral arms fold horizontally against the building or inside the recess, underneath the awning roller. (See drawing above.)

The awning is usually constructed with the canvas in one piece on the awning roller. Sometimes it is necessary to divide the awning roller and canvas into sections, the sections to be operated as a unit with one worm gear. An awning of this type is described as a "Split Type Awning."

Roller support brackets are used to support the intervening ends of the rollers on a split type awning. Another method sometimes used when the roller is divided in two sections is to erect the worm gear between the two sections and use blank end brackets at the ends of the awning for supporting the rollers.

When the opening between sections of a split type awning must be closed, undercovers are used. These undercovers roll up on spring rollers that are erected underneath the center support brackets. The covers are fastened to the front bar of the awning and operate in unison with the awning.

STORE AWNING MEASUREMENTS

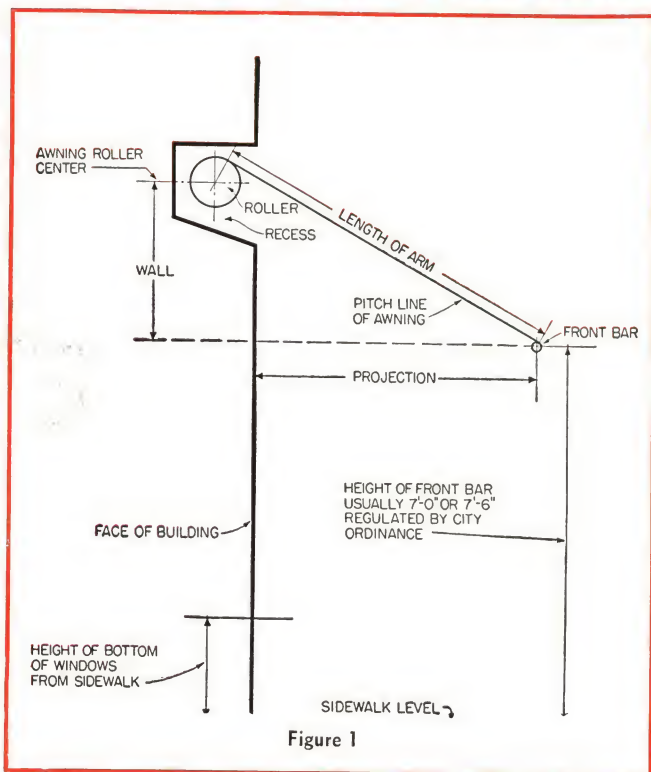


Figure 1

WALL — The "wall" measurement of an awning is the distance down the face of the building, from the center of the awning roller to a point on the face of the building that is in line with the front bar of the awning, when the awning is in its correct projected position. Wall measurement is sometimes described as the "down" of an awning.

Wall measurement is determined by subtracting the height of the front bar of the awning above the sidewalk from the height of the awning roller center from the sidewalk.

The height of the front bar from the sidewalk is usually 7 ft., or 7 ft. 6 in. This height is usually regulated by city ordinance, and referred to as the clearance limit of the awning.

PROJECTION — The "projection" of an awning is the distance from the face of the building to the front bar of the awning when the awning is in its correct projected position. Projection measurement is sometimes described as the "out" of an awning.

Projection measurement is determined by shade requirements of the awning and the awning contractor should determine this measurement.

For proper shade protection an awning usually should project at least as far forward from the face of the building as the bottom of the windows are below the clearance limit of the front bar of the awning. To determine, subtract the height of the bottom of the windows from the sidewalk from the height of the front bar of the projected awning from the sidewalk.

LENGTH — The distance from end to end of an awning across the face of the building is the "length" of the awning.

RIGHT AND LEFT OF AN AWNING — The right and left of an awning is determined by facing the awning looking into the building. Your right and left in this position is the right and left of the awning.

(When inquiring for information about awning construction always give the awning measurements or furnish details that these dimensions can be determined from.)

RECESS CONSTRUCTION

WITHOUT LID — HINGE LID — PIVOT LID

At Left: THE FRANCES SHOP

South Bend, Ind.

Hinge Type Lid operated with one lid operating gear.
Awning is 40 ft. long, split type without undercovers

SUCCESSFUL recess construction must start with the designer of the store front and terminates with the installation of the proper Fanner equipment by a competent awning manufacturer. It is important that the following facts be kept in mind:

(1) The recess must be large enough to accommodate the awning and the equipment that is to be installed in it.

(a) The required depth and height of the recess is governed by the wall and projection of the awning and the use or non-use of a lid.

(b) A larger recess is required whenever a lid is to be used as the recess must accommodate the lid operating mechanism in addition to the awning and its equipment.

(2) The recess opening must not vary in size across the front.

(3) The recess should extend beyond the glass line on both sides to provide space for the gear roller fixtures that must be erected at the ends of the roller, thus allowing the canvas to completely cover the windows.

RECESS DIMENSIONS

LENGTH — A recess should be long enough to extend 5 in. beyond glass line on both sides to provide space for the roller fixtures.

DEPTH — A recess must be deep enough to inclose the roller fixtures and lateral arms when the awning is rolled up. If a lid is to be used the recess must also inclose the lid operating mechanism. With Fanner equipment (roller fixtures, lateral arms, lid mechanism) the minimum inside depth of a recess should be

9 IN. WHEN NO LID IS TO BE USED
10 IN. WHEN A LID IS TO BE USED

HEIGHT — The height of a recess is governed by the angle of the lateral arm in an open position, this angle in turn being governed by the pitch of the awning. The required height varies with the pitch of the awning because of interference from the bottom of the recess with the arm; therefore the height must be sufficient to allow enough clearance between the arm and the bottom of the recess to allow the arm to be adjusted to the angle required.

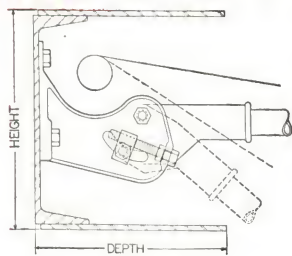


Figure 3

HOW TO DETERMINE REQUIRED HEIGHT OF A RECESS

To determine the height required, the wall and projection of the awning must be known. (See "Store Awning Measurements," page 4.) After determining the wall and projection measurements, lay the awning out to scale as shown in Figure 2. The line from the awning roller center to the front bar center will represent the pitch line of the awning. Extend the awning roller center line toward the front bar as shown. Place protractor on the awning roller center and measure angle between the awning roller center line and the pitch line of the awning. With this angle determined the size recess can be determined by referring to Table 2 if the recess is not

(4) The recess should be high enough above the sidewalk to permit the installation of the awning roller at least 9 ft. 6 in. above the sidewalk.

(5) The back of the recess must be rigid to provide substantial backing and support for the gear roller fixtures and lateral arms. If the recess is framed in wood the back should not be less than 2 in. thick.

(6) If the recess is to be equipped with a lid the top must be level and rigid so it will properly support the lid fixtures that must be fastened to it. The trim of the store front above and below the recess must also be level and parallel.

(7) The bottom of the recess should be inclined and flashed with metal lining so it will drain. The height of the incline does not need to be over 1 in., for if it is run up too high in the back of the recess it may interfere with the installation of the awning equipment.

to be equipped with a lid, and to Table 3 if the recess is to be equipped with a lid.

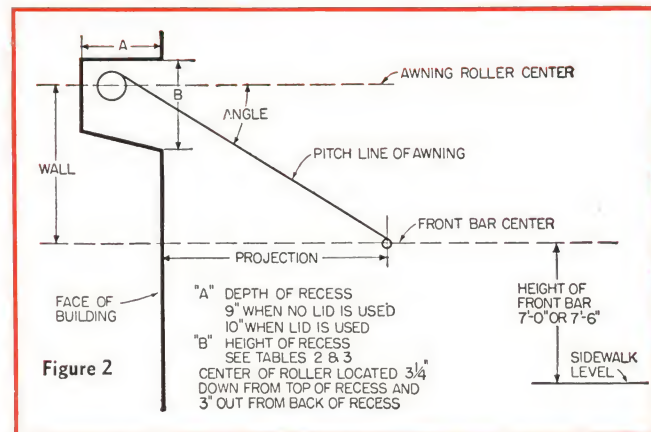


Figure 2

Recess dimensions given in tables below are based on the use of Fanner equipment (roller fixtures, lateral arms, lid operating mechanism) with center of roller located $3\frac{1}{4}$ in. down from the top of the recess and 3 in. out from the back of the recess.

Table 2 Recess Without Lid			Table 3 Recess with Lid		
Angle in degrees	Size recess Inside dimensions		Angle in degrees	Size recess Inside dimensions	
	Depth	Height at front		Depth	Height at front
20° and less	9"	9"	25° and less	10"	10"
Over 20° to and including 31°	9"	10"	Over 25° to and including 33°	10"	11"
Over 31° to and including 38°	9"	11"	Over 33° to and including 39°	10"	12"
Over 38° to and including 45°	9"	12"	Over 39° to and including 44°	10"	13"
Over 45° to and including 49°	9"	13"	Over 44° to and including 47°	10"	14"
Over 49° to and including 52°	9"	14"	Over 47° to and including 50°	10"	15"

LID OPERATING MECHANISMS

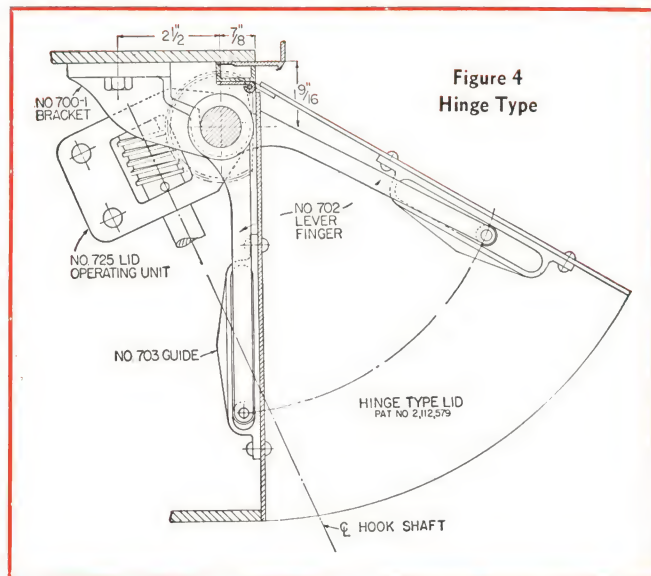
For Concealed Recess Construction

DESIGN harmony and protection are the two principal advantages to the use of a lid for closing the recess opening on a recess installation.

From the standpoint of design, the most attractive effects are achieved when the lid is made of the same metal as the store front, or from metal that harmonizes with it. As a general rule, store front fabricators furnish the lid when this type of awning construction has been specified.

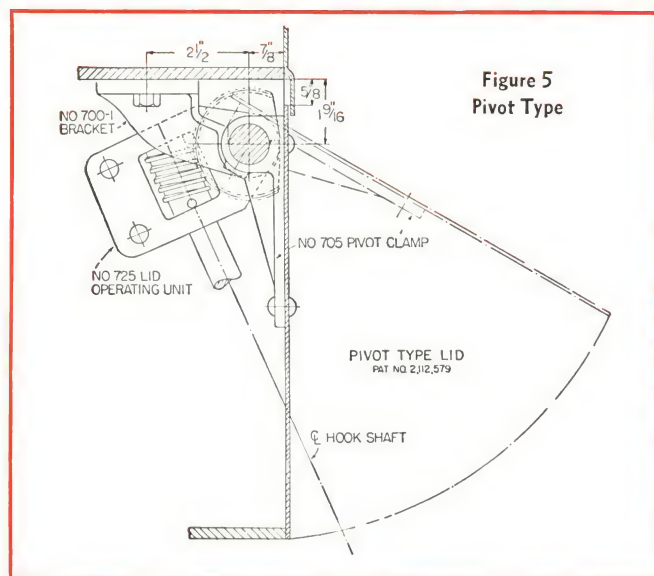
Depending upon the type of lid to be used, Hinge or Pivot, depends the type of mechanism required to operate the lid. The various parts that make up the mechanisms are described and illustrated on the facing page, and will enable the architect to see at a glance the fixtures required and their relation to smoothly operating equipment.

TYPES OF LIDS—Lids are of two types deriving their description from the method used for hinging them.



HINGE TYPE—A lid hinged to the top of recess independent of the lid operating mechanism is described as a "Hinge Type Lid." The lid is joined to the lid operating mechanism by means of lever fingers that are mounted on the lid shaft and guides that fasten to the inner side of the lid. Rotation of the lid shaft causes the lever fingers to regulate the position of the lid. See Figure 4.

A continuous hinge made of non-rusting metal should be used and it should be supplied by the store front fabricator.



PIVOT TYPE—A lid supported by and fastened to the lid shaft by means of pivot clamps is described as a "Pivot Type Lid."

The pivot clamps mount on the lid shaft and the lid is fastened to the clamps and pivots on the shaft when being opened or closed. See Figure 5.

When a pivot type lid is closed there is a small opening between the lid and the top of the recess that should be closed by an overlapping metal strip fastened to the store front.

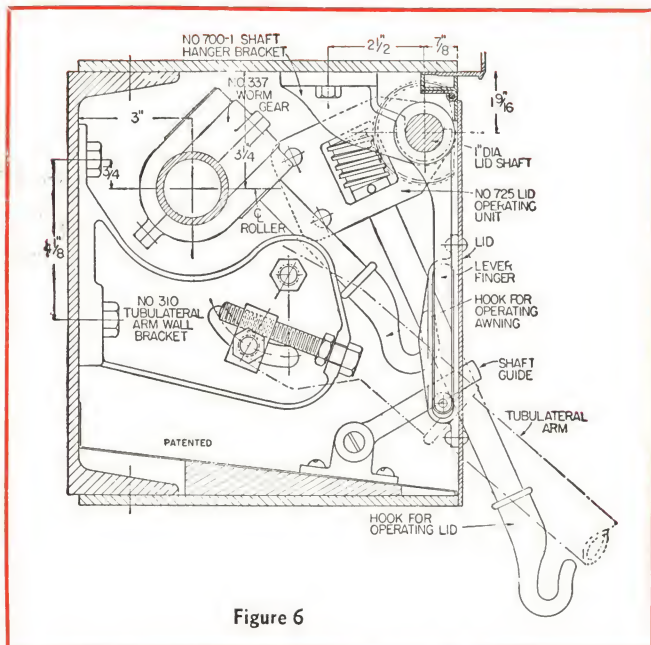


Figure 6

Cross section view of recess showing Lid Operating Gear, Awning Gear and Tubulateral Arm Bracket in position

LID REQUIREMENTS

Lids should be of the lightest construction, consistent with sufficient strength to avoid sagging and buckling. A limit of 4 lbs. per lineal foot is advisable. (Some store front fabricators recommend .078 stock in bronze and .093 stock in aluminum.)

Lids must be rigid and should be reinforced where required. An angular strip placed on the inner side of the lid horizontally along its entire length is effective as a reinforcement. Strip should be placed as near the bottom of the lid as possible but up high enough to clear the bottom of the recess so it will not interfere with the lid closing tight.

The practical length of lids varies with conditions. To be entirely safe it is advisable to make two sections of lids over 30 ft. in length and operate each section with separate operating mechanisms.

SHAFT REQUIREMENTS

The lid shaft must be 1 in. diameter and either cold rolled steel or steel shafting may be used. Shaft must be straight. No holes should be drilled through it but spot drilling for the attachment of the lid fixtures by means of set screws is recommended. Painting the shaft with aluminum paint to prevent rust is advisable.

RECESS REQUIREMENTS

It is of the utmost importance that the recess be of proper construction and of adequate size to accommodate the awning, roller fixtures, lateral arms and lid operating mechanism. See page 5 for information regarding construction and size required.

LID OPERATING SHAFT WITH FIXTURES ASSEMBLED

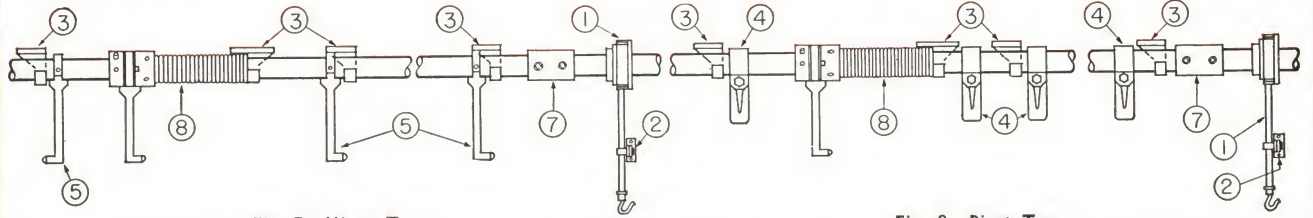
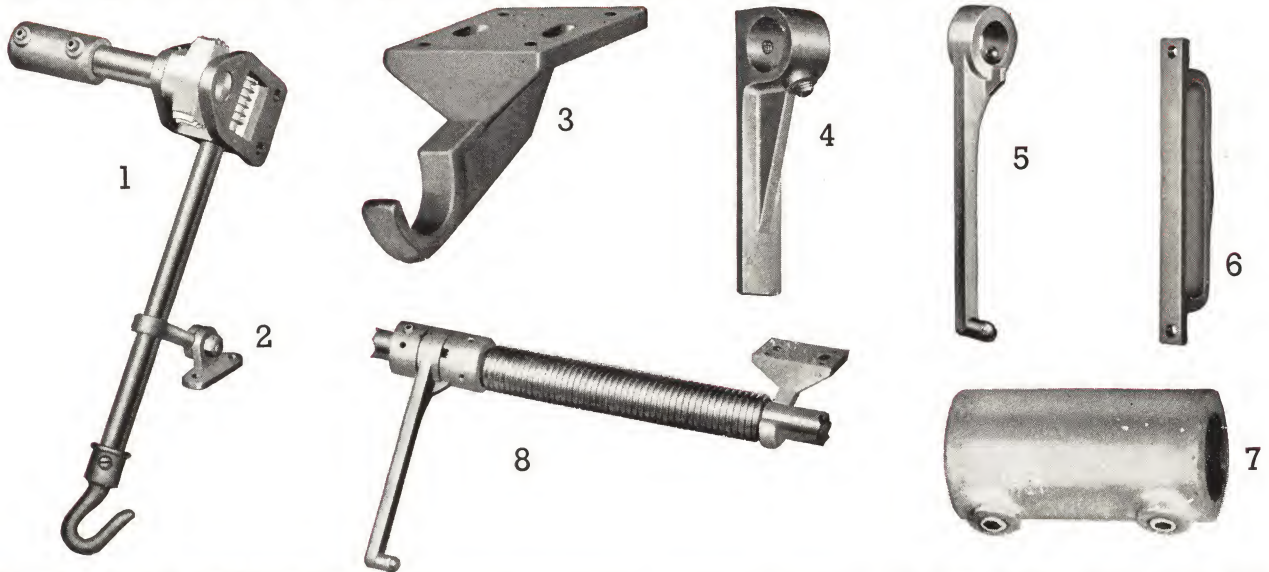


Fig. 7—Hinge Type

Fig. 8—Pivot Type

LID OPERATING FIXTURES (Patent No. 2,111,579)



(1) **NO. 725 LID OPERATING GEAR** — A complete assembled unit for operating the lid. Couples to the lid shaft and fastens to the side of the recess, either left or right. Unless otherwise specified gear is furnished for attachment at right end. Gear shaft can be set at angle position for operation through front of recess or in vertical position for operation through the bottom of recess.

(2) **NO. 728 SHAFT GUIDE** — Provides a bearing for the gear shaft, relieving strain on the lid operating gear.

(3) **NO. 700-1 SHAFT HANGER BRACKET** — Used for supporting the 1 in. diameter lid shaft. Brackets fasten to top of recess. One at each end of shaft and others approximately 3 ft. apart from end to end of shaft.

(4) **NO. 705 PIVOT CLAMP** (For Pivot Type Lids Only) — For fastening lid to the shaft. Clamps mount on shaft approximately 3 ft. apart from end to end of shaft. Lid is fastened to clamps and pivots on shaft by means of them.

(5) **NO. 702 LEVER FINGER** } (For Hinge Type Lids Only) —

(6) **NO. 703 GUIDE** }

These fixtures are used for connecting a Hinge Type Lid to the lid

operating mechanism. The Lever Fingers mount on the shaft approximately 6 ft. apart and the guides fasten to the inner side of the lid, located so that the roller of the Lever Finger will operate in the slot of the guide. As the lid shaft rotates the Lever Fingers operate the lid.

(7) **NO. 706 SHAFT COUPLING** — Used for coupling shafts when more than one length is needed. Coupling is bored to size so shafts will be in line.

(8) **NO. 707 TORSION SPRING ASSEMBLY** (Patent No. 2,111,579) — Used to eliminate the twist and torque in the lid shaft and aid the operating gear in the operation of the lid. Locate one to the left of the Shaft Hanger Bracket second from the end of the shaft opposite the end to which the Lid Operating Gear is attached. From this point locate other Torsion Spring Assemblies at alternate Shaft Hanger Brackets approximately 6 ft. apart. No Torsion Spring Assembly required next to Lid Operating Gear.

The smooth and easy lid operation that results from the use of Fanner Lid Operating Equipment is due, in no small measure, to this Torsion Spring Assembly, a patented Fanner feature. They should be used on every lid installation.

7

FLORSHEIM SHOE STORE, KANSAS CITY, MO.

Awning is 19 ft. in length with Hinge Type Lid. Awning and lid operated with Fanner Equipment



COMPONENT PARTS USED FOR A STORE AWNING

LATERAL ARMS

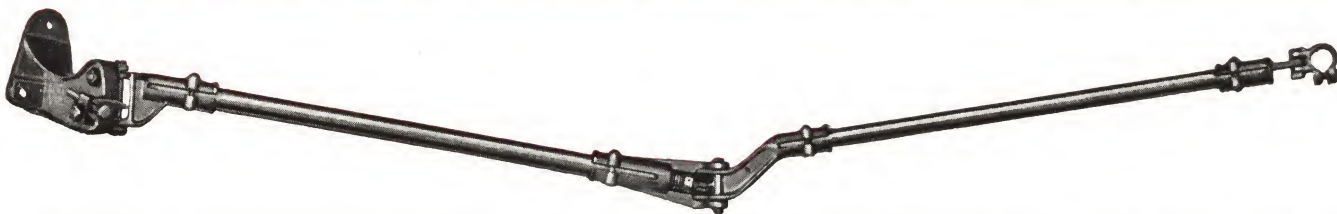
Lateral arms are used to support a store awning when it is projected. Lateral arms fasten under the awning roller and as the awning winds up, the arms fold horizontally against the building underneath the awning roller.

Lateral arms are made in "rights" and "lefts" and at least two

arms (one "right" and one "left") are required for an awning. If the awning exceeds twenty feet (20') in length, additional lateral arms are required. Best results follow when an even number of "right" and "left" arms are used.

The Fanner Tubulateral Arm, a modern creation expertly designed and manufactured, efficient in operation, is the cornerstone of better store awnings.

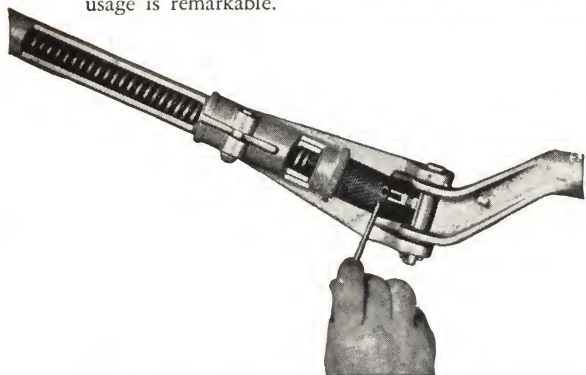
THE FANNER TUBULATERAL AWNING ARM (Patents Nos. 1,759,715, 1,993,183 and 2,123,828)



Considering the Fanner Tubulateral Arm from the standpoint of appearance, efficiency in operation, durability, ease of adjustment and erection, or from any standpoint that a lateral arm can be judged from, is certain to lead to the conviction that it is the outstanding lateral arm. Actual service quickly confirms this conviction for the continued efficiency of the Tubulateral Arm under hard usage is remarkable.

The Tubulateral Arm is the very latest type of lateral arm. Its design is unique, its streamline appearance distinctive and especially adapted to modern store front architecture. It is suitable for either recess construction, open face construction or use under hoods.

It embodies a combination of outstanding and basic features that assure the very utmost in lateral arm efficiency, noteworthy of which are:



View of the center section of the Tubulateral Arm, showing Adjustable Spring Control with section of upper tube cut out to show spring. Adjustment is made by inserting pin in slots of threaded adjustment sleeve and turning sleeve

TUBULAR CONSTRUCTION — Provides maximum strength with lightness and the trim streamline appearance that harmonizes perfectly with modern store fronts.

PARALLEL FOLDING — Provides the neat compactness that typifies the Tubulateral Arm when folded. Because the outer tube is straight the arm folds firmly against the awning roller and into smaller recesses than is possible with arms that have an offset in this tube.

PATENTED ADJUSTABLE CENTER SPRING CONTROL (Patent No. 2,123,828) Insures efficient, positive operation by compelling the Tubulateral Arm to unfold easily no matter how flat the pitch of the awning. When the arm is projected the Control holds it in its corrected projected position, thus keeping the canvas taut and free from bag, which results in improving the appearance of the awning and preventing the canvas from wearing or being damaged through contact with the arm. Control can be adjusted to suit requirements of each particular installation.

NEW WALL BRACKET — Designed for use with either open face or recess construction. This bracket, compact and small enough for installation in even the smaller recesses, is trim in appearance and possesses the rugged strength required for properly supporting the lateral arm. Has three fastening holes which eliminates the drilling of the extra hole that four hole brackets require and also provides a more efficient bearing than is possible with a four hole bracket.

IMPROVED SLANT ADJUSTMENT — The Tubulateral Arm can be adjusted to the exact angle (slant) desired very easily by means of the hex adjustment screw located on the face of the bracket. The improved locking features incorporated into this adjustment prevent the adjustment from slipping and the arm from "whipping" when it is projected with the awning unrolled and subjected to wind pressure.

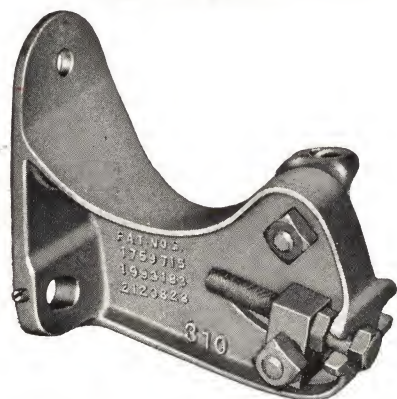
ACCESSIBILITY OF ADJUSTMENT PARTS — Because all adjustment parts are easily accessible, the Tubulateral Arm is extremely easy to adjust thus saving time and making erection easier.

GENERAL — Fine and durable construction characterize the entire Tubulateral Arm and as a result the strength of the arm is uniform which minimizes stress on any one part. The castings are Fanner special analysis malleable iron and are Fleeto Processed to increase their impact strength and prevent them from being embrittled by the application of the hot galvanizing process. The tubular sections of the arm are fabricated from heavy gauge high carbon steel tubing and are assembled into the castings by a unique method that prevents them from twisting or loosening. The sections of the arm are joined with carbon steel hinge pins. The patented center spring control is connected to the arm with bronze chain. The slant adjustment screw is made from high carbon heat treated steel.

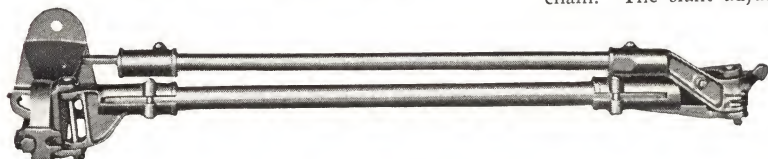
Tubulateral Arms are manufactured in lengths of 6 inch variation starting with 3 ft. 6 in. length arms. Arms 8 ft. 6 in. and longer are made with larger and heavier castings and larger diameter heavier gauge tubing.

Standard finish is hot galvanized. Lustrous black paint finish will be furnished if desired.

Tubulateral Arms are shipped in individual fibre-board cartons.



View of Wall Bracket of Tubulateral Arm, showing slant adjustment screw. Strength and compactness are embodied in design of this bracket



8 Folded view of Tubulateral Arm. Note compactness and how sections fold parallel

GEAR ROLLER FIXTURES

All fixtures, viz: worm gears, gear boxes, blank end brackets, awning checks, center supports and center support brackets required to support and operate an awning roller are encompassed in the description "Gear Roller Fixtures."

Gear Roller Fixtures are manufactured for all types of awning construction and successful awning construction depends on the

selection of the proper type. For best operating results, ball bearing equipped fixtures are recommended especially for large awnings.

The Fanner Line includes an extensive assortment of gear roller fixtures comprising all types and ranging from low cost fixtures to modern ball bearing equipped fixtures. For complete line see our general catalog.

WORM GEARS —BALL BEARING

No. 337 ADJUSTABLE WORM GEAR (For Recess Construction) — This is an excellent worm gear designed especially for recess construction and with power to operate large awnings. Gear shaft can be adjusted to any angle or position required. It has full ball bearing construction, steel cut gears, galvanized malleable iron case and bracket and is equipped with an Alemite fitting for easy lubrication.

No. 131 (For Open Face Construction) — This fine sturdily constructed worm gear is recommended for smooth, easy operation of large awnings. It has full ball bearing construction, steel cut gear, galvanized malleable iron case and is equipped with an Alemite fitting for easy lubrication.

BLANK END BRACKET

No. 3370 BALL BEARING BLANK END BRACKET — Made with horizontal fastening plate for recess construction. Used for supporting awning roller on end opposite gear.

ROLLER SUPPORT BRACKET

No. 338 BALL BEARING ROLLER SUPPORT BRACKET — This is an excellent bracket for supporting the roller of a split type awning. The roller bears and revolves on the ball bearing that the bracket is fitted with. The bracket is galvanized malleable iron. Made for $1\frac{1}{8}$ in. O.D. tubing, $1\frac{1}{2}$ in. steel pipe and $1\frac{1}{4}$ in. steel pipe and with 3 in. projection.

AWNING CHECK

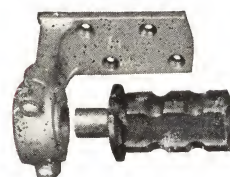
No. 601 BALL BEARING AWNING CHECK — This is a valuable fixture that should be used on every roller awning. It is used to regulate the distance an awning can be unrolled thus preventing the canvas from being rolled on the inner side of the roller with consequent cutting of the canvas. It fits inside the roller and takes the place of the blank end bracket. It is very easy to adjust and will not jam. It has full ball bearing construction, malleable iron bracket and frame and brass shaft and stop nut. Made to fit $1\frac{1}{8}$ in. O.D. and $2\frac{3}{8}$ in. O.D. steel tubing and $1\frac{1}{2}$ and 2 in. steel pipe and is equipped with brackets with 3 or $3\frac{1}{2}$ in. projection.

CENTER SUPPORT

No. 680 BALL BEARING CENTER SUPPORT (Patent Applied for) — This center support eliminates wrinkling and wearing of the cloth, requires no reinforcing strip in the awning cover and helps to provide smooth, easy roller operation. It introduces an entirely new principle in center support construction. The bottom roller carriers are suspended on springs that cause the rollers of the support to bear evenly and firmly on the canvas. Compressed by the weight of the awning roller, the springs adjust to the alternate increase and decrease in weight resulting from the rolling and unrolling of the canvas simultaneously with the operation of the awning roller. The roller shafts of the support are mounted on ball bearings to insure smooth, easy operation and prevent the rollers from sticking. The top of the support is removable and adjustable, vertically and horizontally so large and small rollers can be accommodated.

The support will fit into an awning recess and is designed so installation is easy as all fastening bolts and adjustment parts are accessible from the front of the recess.

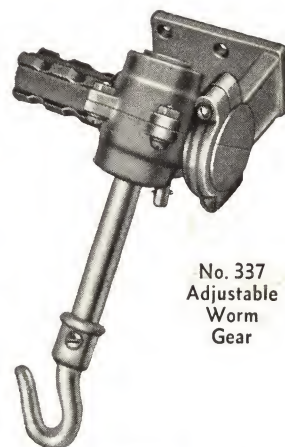
The support has full ball bearing construction, galvanized malleable iron frame, bronze springs and special treated hardwood rollers.



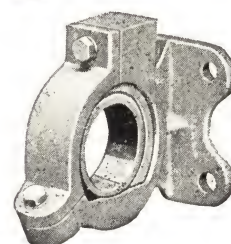
No. 3370
Blank End Bracket



No. 131
Worm
Gear



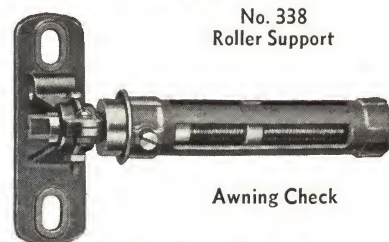
No. 337
Adjustable
Worm
Gear



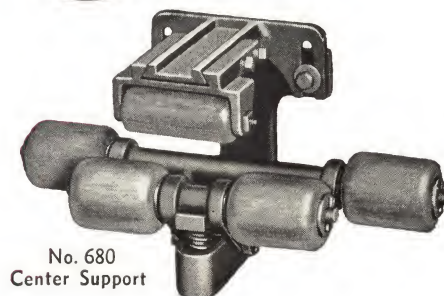
No. 338
Roller Support



Winding Brace



Awning Check



No. 680
Center Support

AWNING ROLLERS

Awning rollers must be constructed to eliminate all sag at the center. A sagging roller will cause excessive wear of moving parts and loosening of bolts and screws and result in unsatisfactory performance of the entire awning installation.

Awning rollers free of sag can be constructed from Fanner High Carbon Steel Tubing that is rolled especially for awning rollers. This tubing is rigid and light. It is furnished in lengths of 20 ft. and in $1\frac{1}{8}$ in. outside diameter and $2\frac{3}{8}$ in. outside diameter. Plain and hot galvanized finishes are available.

FANNER CRANK STYLE OPERATING FIXTURES

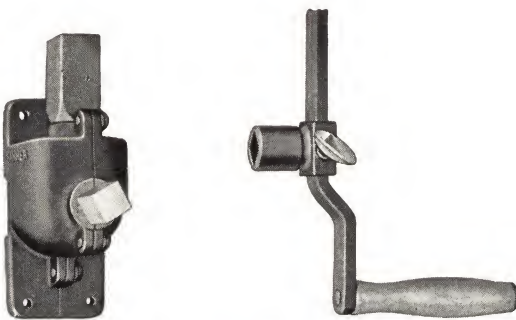
For Operating Awning Worm Gears and Lid Operating Gears

Awning worm gears and lid operating gears usually equipped with a hook and operated by means of a winding brace can also be connected to a gear box that operates by means of a crank. Fixtures for operating by this later method are shown on this page.

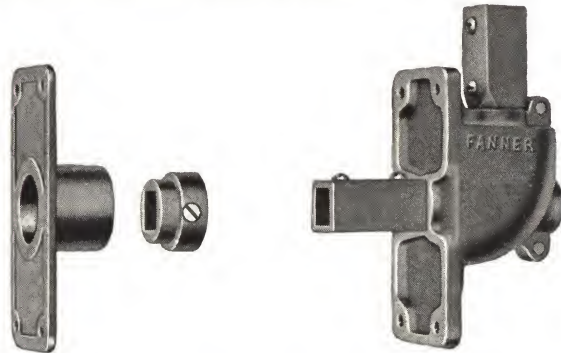
Gear boxes can be fastened to the face of the building at a convenient distance above the sidewalk with the drive shaft running down the face of the building or the box can be installed inside the

masonry jam or in the pilaster with the drive shaft inside. If the later method is used, it can be arranged so the gear box can be operated from either inside or outside the building.

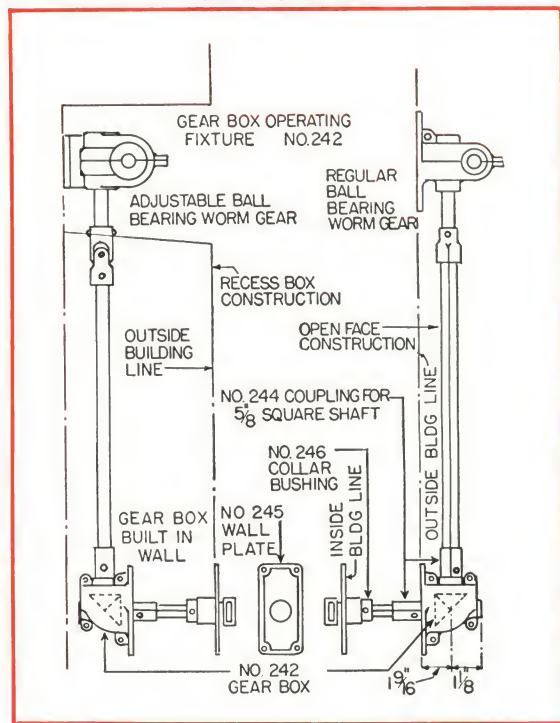
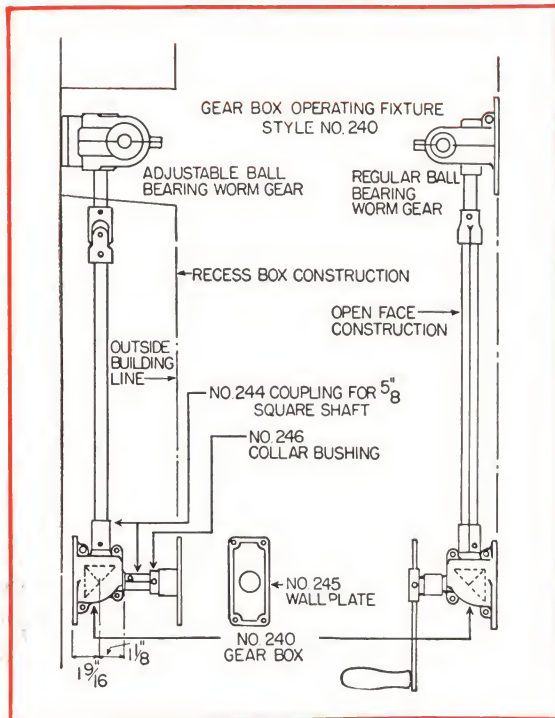
These fixtures are furnished in either galvanized malleable iron or bronze. Gear boxes are equipped with bronze gears. Style No. 240 gear box has the crank shaft extending from the front and No. 242 has the shaft extending from the back.



No. 240 GEAR BOX



No. 242 GEAR BOX



EASTMAN KODAK STORE, KANSAS CITY, MO.
Hinge Type Lid, Awning and Lid Operated with Fanner Equipment



STORE AWNING SPECIFICATIONS

Many chain stores and other large users of awnings deem it advisable to prepare specifications covering their awnings. To assist those interested in this commendable practice, we have prepared the following specification that covers the important factors in awn-

ing construction. Awnings built in accordance with this specification are the better type that result only when the best of materials are used and correct erection methods are followed.

AWNING SPECIFICATIONS

AWNING ROLLERS—Rollers shall be 1 $\frac{1}{8}$ " or 2 $\frac{3}{8}$ " in. outside diameter Fanner High Carbon Steel Tubing. If over 20 ft. in length, rollers shall be made in sections and coupled with steel or malleable iron roller couplings. Ends of rollers shall be fitted with malleable iron gudgeons securely riveted.

GEAR ROLLER FIXTURES—Awnings shall be operated by means of Fanner Galvanized Worm Gears of proper type and capacity. Fanner Galvanized Blank End Brackets or Ball Bearing Awning Checks to match worm gears selected shall be used.

If gear boxes, center supports or center support brackets are required they shall be of Fanner type and manufacture.

Selection of gear roller fixtures shall be worked out in accordance with THE FANNER MANUFACTURING COMPANY specifications on gear roller fixtures.

SUPPLEMENTAL PARTS—Winding braces and all miscellaneous awning hardware that may be required shall be of Fanner type and manufacture.

LATERAL ARMS—Fanner Galvanized Tubulateral Arms shall be used, size to be determined by the wall and projection measurements of the awning. Two arms shall be used for awnings up to 20 ft. in length with another arm added for each additional 10 ft. of awning. (An even number of lateral arms should always be used when possible.)

FRONT BAR—Front bar shall be 1 in. inside diameter galvanized steel pipe finished with a galvanized cap on each end.

CONSTRUCTION OF AWNINGS—The construction of the awnings shall be so arranged that there will be a clearance of at least (7 ft. or 7 ft. 6 in.) from the sidewalk to the front bar of the awning when the awning is lowered for use. The awning shall project from the face of the building sufficient distance to protect

the windows from sun at all times unless otherwise directed or prevented by some local building condition.

ERECTION OF AWNINGS—Gear roller fixtures and lateral arms must be mounted (tap-screwed) on steel plates of proper size and the plates securely fastened to the building. Whenever steel backing is available the gear roller fixtures and lateral arms may be fastened to it by drilling and tapping the steel and using machine bolts for fastening or by bolting entirely through the steel. Lock washers must be used on all bolts and screws. All bolts and screws must be galvanized.

GENERAL—The awning contractor shall comply with all local, city and state regulations covering the work and shall provide all necessary permits required.

The awning contractor shall be responsible for any damage to the property of caused by the carelessness or negligence of himself or his employees during the installation. He shall provide workmen's compensation and liability insurance for the protection of his employees and the general public until the work has been completed.

The awning contractor's estimate shall include supplying all materials, labor and equipment necessary for the complete manufacture and erection of the awnings.

AWNING FABRIC—(A specification covering the awning fabric can be included. We make no recommendation as to this material as our sphere in the awning industry is confined entirely to the specialized manufacture of awning hardware fixtures, lateral arms and lid operating mechanisms. Our distributors either manufacture or distribute awning fabrics and will be glad to co-operate with you.)

LID MECHANISMS—When recesses are to be equipped with lids the lids shall be operated with Fanner Mechanisms. Selection of mechanism will be worked out in accordance with THE FANNER MANUFACTURING COMPANY specifications on lid mechanisms.

FANNER SPECIFICATIONS ON STORE AWNING EQUIPMENT

Listed below is mechanism recommended for store awnings of average wall and projection. Other combinations of fixtures besides those listed are available and for details see our general catalog or write us.

Awning Length	Recess Construction Worm gear equipped with hook and operated by means of winding brace						Open Face Construction Worm gear operated by means of winding brace or gear box					
	20' and less	Over 20' to 30'	Over 30' to 40'	Over 40' to 50'	Over 50' to 60'	Over 60' to 70'	20' and less	Over 20' to 30'	Over 30' to 40'	Over 40' to 50'	Over 50' to 60'	Over 60' to 70'
Fanner Worm Gear Required	No. 348-S or 349-S	No. 348-S or 349-S	No. 337 or 338	No. 337 or 338	No. 337 or 338	No. 337 or 338	No. 30-S No. 335-S No. 336-S No. 346-S	No. 30-S No. 335-S No. 336-S No. 346-S	No. 334 or 344	No. 131	No. 131	No. 131
*Fanner Blank End Bracket Required	No. 53 or 53-B	No. 53 or 53-B	No. 3370 or 3380	No. 3370 or 3380	No. 3370 or 3380	No. 3370 or 3380	No. 52 or 52-B	No. 52 or 52-B	No. 3340 1310	No. 1310	No. 1310	No. 1310
*Fanner Ball Bearing Awning Check Required	No. 604-R or 605-R	No. 604-R or 605-R	No. 604-R or 605-R	No. 604-R or 605-R	No. 604-R or 605-R	No. 604-R or 605-R	No. 604 or 605	No. 604 or 605	No. 606 or 607	No. 607	No. 607	No. 607
Quantity of Center Support Required	0	1	2	2	3	4	0	1	2	2	3	4
Quantity of Tubu- lateral Arms Re- quired	2	3	4	5	6	7	2	3	4	5	6	7
Size Tubing Re- quired for Roller	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	1 $\frac{1}{8}$ " O.D.	2 $\frac{3}{8}$ " O.D.	2 $\frac{3}{8}$ " O.D.	2 $\frac{3}{8}$ " O.D.	2 $\frac{3}{8}$ " O.D.
Size Front Bar Required	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe	1" Pipe

* The awning check takes the place of a blank end bracket and therefore when a check is used no blank end bracket is required.

† The quantity of Tubulateral Arms shown is the minimum quantity required for an awning of this length. It is advisable to use an even number of arms whenever possible as a better working awning will result.

In the above specification ball bearing worm gears and blank end brackets are not specified for awnings 30 ft. and less in length. They may, however, be substituted if desired and easier awning operation will result from such substitution.

SPECIFICATIONS OF FANNER WORM GEARS RECOMMENDED ABOVE

Gear No.	Projection	Gear Ratio	Kind of Gears	Ball Bearing Equipped	Back Plate Horizontal	Measurement Vertical
30-S	3"	7 to 1	Steel Cut	No	2 $\frac{1}{4}$ "	6 $\frac{1}{4}$ "
131	3 $\frac{1}{2}$ "	11 to 1	Steel Cut	Yes	2 $\frac{1}{4}$ "	6 $\frac{1}{4}$ "
334	3"	8 to 1	Steel Cut	Yes	2 $\frac{5}{8}$ "	6 $\frac{1}{4}$ "
335-S	3 $\frac{1}{2}$ "	7 to 1	Steel Cut	No	2 $\frac{1}{4}$ "	6 $\frac{1}{4}$ "
336-S	3"	8 to 1	Steel Cut	No	2"	6 $\frac{3}{8}$ "
*337	3"	11 to 1	Steel Cut	Yes	4"	2 $\frac{1}{8}$ "
*338	3 $\frac{1}{2}$ "	11 to 1	Steel Cut	Yes	4"	2 $\frac{1}{8}$ "
344	3 $\frac{1}{2}$ "	8 to 1	Steel Cut	Yes	2 $\frac{5}{8}$ "	6 $\frac{1}{4}$ "
346-S	3 $\frac{1}{2}$ "	8 to 1	Steel Cut	No	2"	6 $\frac{3}{8}$ "
*348-S	3 $\frac{1}{2}$ "	8 to 1	Steel Cut	No	4"	2 $\frac{1}{8}$ "
*349-S	3 $\frac{1}{2}$ "	8 to 1	Steel Cut	No	4"	2 $\frac{1}{8}$ "

* Adjustable type worm gear for recess construction.

For specifications on other Fanner worm gears and gear roller equipment, see our general catalog.

THE FANNER MANUFACTURING CO.



AKRON FURNITURE CO.
Akron, Ohio



FORUM CAFETERIA
Kansas City, Mo.



JEANETTE'S SWEET SHOP
Hoboken, N. J.